

William Schrab

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EDUCATION

University of Minnesota - Twin Cities

Bachelors of Science in Mechanical Engineering

Expected May 2027

Masters of Science in Mechanical Engineering

Expected May 2028

GPA: 3.841, Dean's List

TECHNICAL SKILLS

CAD/CAM: Creo, SolidWorks, Onshape, Ansys

Hardware: Soldering, Fixture Design, 3D Printing

Office/Regulatory: MasterControl, Excel, Word, PowerPoint

Programming/Analysis: C++, Python, MATLAB, R, Mathematica, NI Labview

ENGINEERING EXPERIENCE

Manufacturing Engineer Intern

May 2026 - August 2026

Halozyne, Minnetonka, MN

- **Quality Compliance:** Standardized preventative and corrective maintenance procedures in MasterControl (QMS) for high-speed pharmaceutical packaging lines, eliminating recurring machine failures and reducing unplanned downtime.
- **3D Printing & Fixture Design:** Designed, rapid-prototyped, and iterated 13+ revisions for custom 3D-printed manufacturing fixtures, optimizing operator ergonomics and packaging speed.
- **Failure Analysis:** Identified root cause of station failures and implemented design modifications to extend component lifespans.
- **Precision Fixturing:** Engineered custom mounts using SolidWorks for Micro-Vu inspection systems, enabling repeatable and high-precision quality verification of tight tolerance device components.

Lab Assistant

May 2025 - Present

Li Research Group, University of Minnesota, Professor: Jun Li

- **Experimental Facility Design:** Engineered and constructed a large scale environmentally controlled wind tunnel incorporating humidity, speed, and temperature controls to recreate precise conditions.
- **Humidification System Design:** Designed a humidification system for wind tunnel utilizing compressed air, siphoned water, and atomizing nozzle to maintain stable relative humidity across variable air speeds.
- **Literature Driven Hardware Selection:** Evaluated droplet evaporation curves from academic papers to determine necessary nozzle criteria for humidification system.
- **Cross-Functional Collaboration:** Partnered with Ph.D. researchers to collect and analyze ice initiation data, advancing frost mitigation research on novel anti-icing coatings.
- **Process Optimization:** Implemented system improvements to resolve air leaks, condensate drainage, and environmental drift, significantly improving testing repeatability and tunnel usability.

Intern

May 2024 - August 2024

Ergodyne, Saint Paul, MN

- **Technical Photography:** Photographed and measured hundreds of different products packaging components.
- **Regulatory Compliance:** Updated packaging specifications to comply with new shipping standards.
- **Cross-Functional Collaboration:** Partnered with marketing and operations to streamline data collection and distribution of product data.

ENGINEERING PROJECTS

- Engineered, manufactured, and programmed a battery-powered compact 3-string braiding robot using Creo Parametric and Arduino
- Collaborated on a group project to design a 4 link mechanism to transfer a golf ball between other group's mechanisms
- Hobby projects: custom cycloid drive | electric guitar | multi round potato cannon | computer building | lighting design and control